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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/320,472 05/25/99 USHIDA

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EXAMINER

MMC2/0404

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ART UNIT PAPER NUMBER

DATE MAILED:

04/04/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/320,472

Applicant(s)
USHIDA ET AL

Examiner
Alan Mathews

Group Art Unit
2851



☒ Responsive to communication(s) filed on Nov 5, 1999 and Jun 30, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-29 and 91-97 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-29 and 91-97 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☒ received in Application No. (Series Code/Serial Number) 08/370,216

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Oath/Declaration

1. The reissue oath/declaration filed with this application is defective because it fails to identify at least one error which is relied upon to support the reissue application. See 37 CFR 1.175(a)(1) and MPEP § 1414. Paragraph 7) of Applicant's "DECLARATION IN SUPPORT OF REISSUE APPLICATION" has only a general statement that "claims of the scope of claims 26-29 of our reissue application constitutes an error ----". MPEP § 1414 states on page 1400-13 under **II**:

In identifying the error, it is sufficient that the reissue oath/declaration identify a single word, phrase, or expression in the specification or the original claim, and how it renders the original patent wholly or partly inoperative or invalid.

Applicant has not identified a word, phrase, or expression in the original claim and how it renders the original patent wholly or partly inoperative or invalid. See the remainder of MPEP § 1414 for further explanation of this requirement.

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2. The reissue oath/declaration filed with this application is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following:

A. It lacks a statement required by 37 CFR 1.175 (a)(2). The oath/declaration needs to state that all errors being corrected in the reissue application up to the time of the filing of the oath or declaration arose without any deceptive intention on the part of the applicant.

B. It does not identify the post office address of each inventor. A post office address is an address at which an inventor customarily receives his or her mail and may be either a home or business address.

C. The oath/declaration does not cover errors corrected after the filing of the declaration, since Applicant has submitted preliminary amendments on October 5, 1999, and June 30, 2000 that are not covered by the declaration. Applicant must submit a supplemental oath or declaration stating "That every such error arose without any deceptive intention on the part of the applicant" (see 37 CFR 1.175(b)(1), or language equivalent thereto).

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Claim Rejections

3. Claims 1-29 and 91-97 are rejected as being based upon a defective reissue declaration under 35 U.S.C. 251 as set forth in paragraphs 1 and 2) above. See 37 CFR 1.175.

The nature of the defect(s) in the declaration is set forth in the discussion in paragraphs 1) and 2) above in this Office action.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1 - 29 and 91-97 are rejected under 35 U.S.C. 102(e) as being anticipated by Inoue et al (U. S. Patent No. 5,627,626). Inoue et al discloses in figure 70 an illumination optical system which includes 1, 11, 4, 10, and also includes optical integrator 5 (see column 1, line 37) and a stop 9. The projection optical system includes element 14. Inoue et al further discloses in

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column 3, lines 21-33, that one could insert the filter shown in figure 72(a) in place of stop 9 in figure 70. Inoue et al further states in column 3, lines 39-41 that the central shielding ratio is represented by $\varepsilon = r_2/r_1$ where r_1 and r_2 are the outer and inner diameters of each of the annular filters shown in figures 72(a)-72(d). Column 3, lines 51 and 52 state that the ε value is normally set to be about 0.5 to 0.7. This satisfies the formula set forth in claims 1, 12, and 21-26, which states

$$1/3 \leq d_1/d_2 \leq 2/3$$

With respect to claim 27, column 3, lines 11 and 12 of Inoue et al states that $\sigma = 0.5 - .07$, and Applicant's instant application in column 5, line 7, has defined σ as:

$$\sigma = NA_2/NA_1$$

This satisfies the formula set forth in claims 1, 12, 21-25, and 27, which states:

$$0.45 \leq NA_2/NA_1 \leq 0.8$$

With respect to claim 28, figure 68 discloses selecting different filters. In addition, with respect to lines 9-11 of claim 28, "changing the intensity distribution-----annular increased intensity

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portion" appears to be a method step in an apparatus claim and is not awarded any patentable weight. With respect to claim 29, figure 72(d) discloses a circular shape filter that could also be inserted in place of stop 9. It is noted that as stated in the indefiniteness rejection above, lines 12-16 of claim 29 are vague. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese document 61-91662 (cited by Applicant in a PTO-1449 on March 10, 1993 in the parent application 07/991,421) in view of either Kawashima et al (U. S. Patent No. 5,489,966), Kimura (U. S. Patent No. 5,168,157), or Takahashi (U. S. Patent No. 4,902,115). The Japanese document 61-91662 discloses in figure 5 an illumination optical system including elements 1, 11, 4, 10, and including an optical integrator 5 and stop 9 that forms a substantially annular

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secondary light source. The annular stop shown in figure 1 can be used in place of stop 9 in figure 5. Thus, the Japanese document 61-91662 discloses substantially the invention claimed except for specifically disclosing that the stop satisfies the following conditions:

$$1/3 \leq d_1/d_2 \leq 2/3$$

Kawashima et al discloses in figure 11B the use of stop 160 which satisfies the above relationship for the purpose of improving the distribution of light. Kimura discloses in figure 5 the use of ring stop 60 which satisfies the above relationship for the purpose of improving the distribution of light. Takahashi discloses in figure 5B a stop forming annular light which satisfies the above relationship for the purpose of improving the distribution of light. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the Japanese document 61-91662 with an aperture stop that satisfies the above relationship in view of either Kawashima et al (U. S. Patent No. 5,489,966), Kimura (U. S. Patent No. 5,168,157), or Takahashi (U. S. Patent No. 4,902,115) for the purpose of improving the distribution of light.

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Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patent to Dewa et al is cited for the same reason that Applicant mentioned it in Paper No. 3. The patent to Taniguchi et al is cited to show the U. S. Equivalent to the Japanese Patent document 05-175100 cited by Applicant in a parent application. The other patents are cited for the same reason they were cited in the parent.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Alan Mathews at telephone number (703) 308-1706. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ, Adams, can be reach on (703) 308-2847. The fax phone number for this Group is (703) 305-34[31,32]. Any inquiry of a general nature or related to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.

AAM

March 31, 2001


Alan A. Mathews
Primary Examiner